

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: NEO-RAY

Report Number: P331551-940

Luminaire Tested: **S122DIW-S675D1440U940-4F0-1E-UDD-D**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P331551-940
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1807-864-2,
Test Lab: INNOVATION CENTER
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: NEO-RAY
Catalog Number: S122DIW-S675D1440U940-4F0-1E-UDD-D
Description: DEFINE 2 DIRECT-INDIRECT WALL MOUNT LED LUMINAIRE
DOWNLIGHT 675 LUMENS PER FOOT, DROP SATIN WHITE DIFFUSER
UPLIGHT 1440 LUMENS PER FOOT, NO LENS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7536.9 lumens
Efficiency: N/A
Efficacy: 110.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.32 / 1.42
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.08')
CIE Type: Semi-Indirect

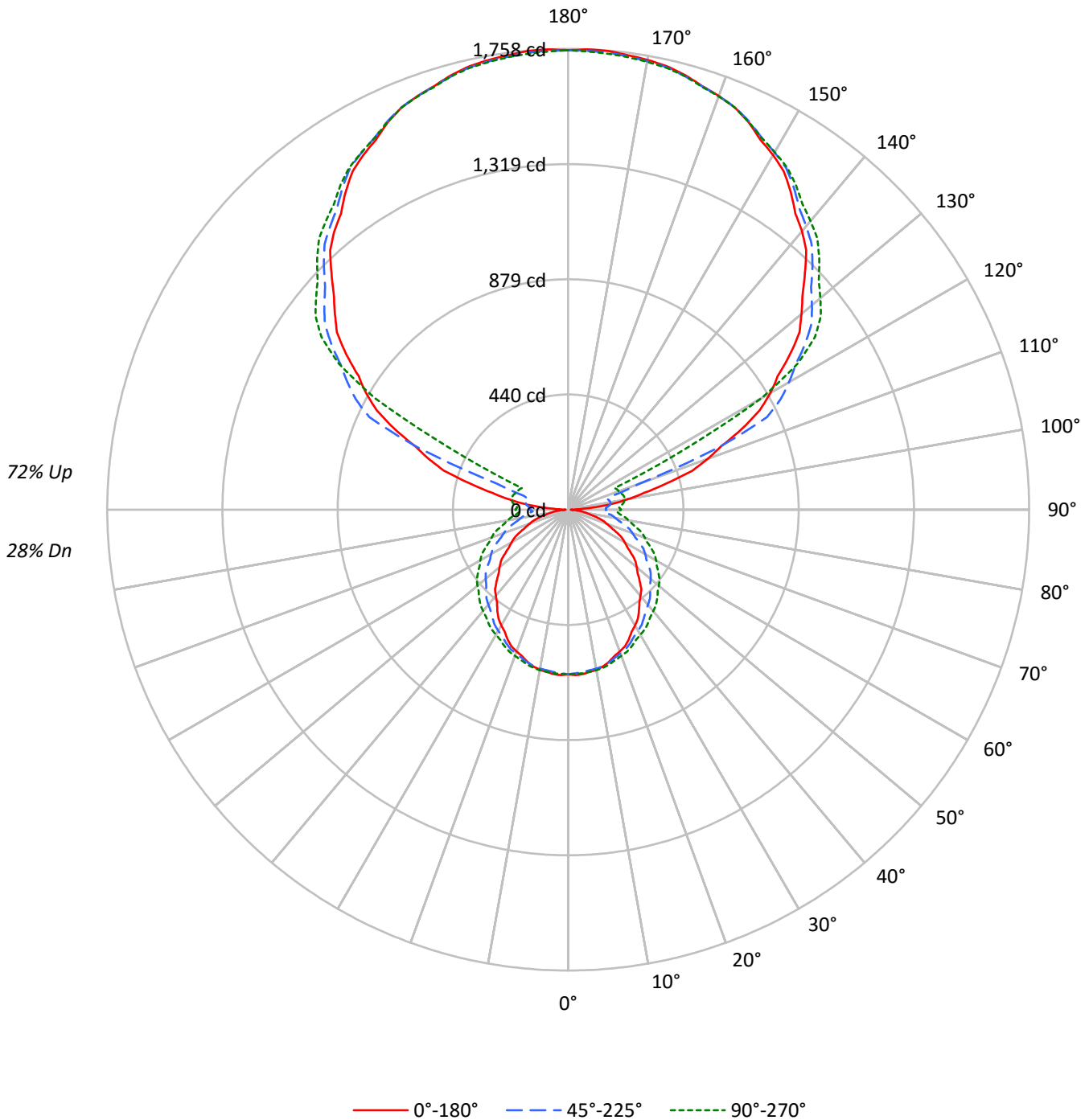
Input Watts (W): 68.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P331551-940

CATALOG NUMBER: S122DIW-S675D1440U940-4F0-1E-UDD-D

Luminous Intensity Polar Plot





TEST NUMBER: P331551-940

CATALOG NUMBER: S122DIW-S675D1440U940-4F0-1E-UDD-D

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	92	88	83	80	82	78	75	72	61	59	57	45	44	42	31	30	29	22
2	83	76	70	64	74	68	63	58	53	49	46	39	37	35	26	25	24	18
3	76	66	59	53	67	59	53	48	46	42	38	34	31	29	23	21	20	15
4	69	58	51	45	61	52	46	40	41	36	32	30	27	24	20	18	17	12
5	63	52	44	38	56	46	40	34	36	31	28	27	24	21	18	16	14	11
6	58	46	38	32	52	42	35	30	33	28	24	24	21	18	17	14	13	9
7	54	42	34	28	48	37	31	26	29	24	21	22	18	16	15	13	11	8
8	50	37	30	25	44	34	27	22	27	22	18	20	17	14	14	11	10	7
9	46	34	27	22	41	31	24	20	24	19	16	18	15	12	13	10	9	6
10	43	31	24	19	38	28	22	18	22	18	14	17	13	11	12	9	8	6

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	10141	10141	10141
5°	10191	9762	9724
10°	10126	9474	9367
15°	9987	9168	8990
20°	9810	8841	8627
25°	9637	8525	8298
30°	9392	8201	7967
35°	9142	7888	7735
40°	8880	7621	7501
45°	8632	7383	7302
50°	8365	7166	7106
55°	8089	6934	6906
60°	7745	6695	6695
65°	7391	6412	6445
70°	6992	6110	6173
75°	6483	5811	5925
80°	5680	5509	5672
85°	4908	5245	5473



TEST NUMBER: P331551-940

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.5	0.8
10°-20°	170.7	2.3
20°-30°	258.6	3.4
30°-40°	315.0	4.2
40°-50°	338.9	4.5
50°-60°	329.1	4.4
60°-70°	287.4	3.8
70°-80°	221.2	2.9
80°-90°	152.8	2.0
90°-100°	160.8	2.1
100°-110°	289.1	3.8
110°-120°	622.4	8.3
120°-130°	973.6	12.9
130°-140°	1017.6	13.5
140°-150°	937.1	12.4
150°-160°	751.8	10.0
160°-170°	484.5	6.4
170°-180°	166.8	2.2
0°-30°	488.8	6.5
0°-40°	803.8	10.7
0°-60°	1471.8	19.5
0°-90°	2133.2	28.3
90°-120°	1072.3	14.2
90°-150°	4000.6	53.1
90°-180°	5404.0	71.7
0°-180°	7536.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	628	628	628	628	628	
5°	630	627	622	627	626	60
15°	601	602	603	610	610	169
25°	546	553	561	571	574	251
35°	471	486	503	523	530	294
45°	386	411	442	470	480	298
55°	296	329	376	408	420	264
65°	202	247	300	336	350	201
75°	112	163	221	259	272	118
85°	33	89	148	184	198	35
90°	10	77	146	187	202	10
95°	90	94	154	193	205	107
105°	390	434	156	200	216	417
115°	733	767	837	304	196	721
125°	1033	1051	1103	1135	1148	921
135°	1277	1297	1318	1348	1354	986
145°	1480	1480	1500	1514	1513	926
155°	1630	1620	1633	1640	1631	751
165°	1717	1710	1713	1721	1713	485
175°	1756	1748	1750	1758	1746	167
180°	1753	1753	1753	1753	1753	



TEST NUMBER: P331551-940

CATALOG NUMBER: S122DIW-S675D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	631.8	631.2	630.8	630.3	629.8	629.0	627.9	626.7	625.6	624.5	625.3
5°	629.9	629.3	628.7	628.1	627.5	626.6	625.4	624.2	622.9	621.7	622.9
7.5°	624.3	623.8	623.5	623.0	622.7	622.0	621.1	620.1	619.2	618.3	619.7
10°	619.9	619.5	619.1	618.7	618.3	617.8	617.2	616.6	616.0	615.4	617.0
12.5°	612.6	612.7	612.8	612.9	613.0	612.8	612.3	611.9	611.4	611.0	612.6
15°	600.8	601.2	601.6	602.0	602.4	602.6	602.6	602.6	602.6	602.6	604.4
17.5°	585.5	586.4	587.2	588.1	588.9	589.7	590.3	590.9	591.6	592.3	594.1
20°	575.3	576.3	577.3	578.4	579.3	580.2	581.0	581.9	582.7	583.5	585.8
22.5°	564.4	565.5	566.8	567.9	569.1	570.2	571.4	572.5	573.6	574.8	577.0
25°	546.2	547.6	549.0	550.5	551.9	553.5	555.3	557.1	558.9	560.7	563.2
27.5°	524.3	526.6	529.0	531.3	533.6	535.8	538.0	540.1	542.2	544.4	547.4
30°	509.8	512.4	515.1	517.6	520.3	522.9	525.6	528.2	530.8	533.4	536.6
32.5°	493.7	496.7	499.6	502.6	505.6	508.6	511.8	514.8	517.9	521.0	524.8
35°	470.6	474.0	477.5	480.9	484.4	488.0	491.9	495.7	499.5	503.4	507.8
37.5°	445.5	449.5	453.4	457.4	461.4	465.8	470.8	475.8	480.7	485.7	490.7
40°	428.7	433.2	437.7	442.1	446.6	451.5	457.0	462.4	467.9	473.3	478.6
42.5°	412.8	417.1	421.6	426.1	430.5	435.9	442.2	448.4	454.7	461.0	466.7
45°	385.9	391.5	396.9	402.3	407.8	414.1	421.2	428.3	435.3	442.4	448.7
47.5°	359.5	365.5	371.5	377.4	383.3	390.5	398.8	407.1	415.4	423.7	430.3
50°	341.3	347.7	353.9	360.2	366.4	374.2	383.3	392.4	401.4	410.5	417.4
52.5°	323.9	330.5	337.1	343.7	350.3	358.4	367.9	377.6	387.1	396.7	403.8
55°	295.9	303.1	310.4	317.7	324.9	333.9	344.4	354.9	365.4	375.9	383.3
57.5°	268.1	276.4	284.6	292.8	301.0	310.5	321.2	331.9	342.7	353.4	361.2
60°	248.5	257.2	265.9	274.6	283.3	293.5	305.0	316.5	328.0	339.6	347.2
62.5°	231.0	240.0	249.1	258.1	267.2	277.4	288.9	300.4	312.0	323.5	331.7
65°	202.1	212.0	221.9	231.8	241.7	252.6	264.6	276.5	288.5	300.4	308.7
67.5°	175.5	185.8	196.3	206.6	217.0	228.2	240.4	252.6	264.8	277.1	285.4
70°	156.6	167.1	177.6	188.2	198.7	210.2	222.7	235.2	247.8	260.4	269.0
72.5°	139.1	149.9	160.8	171.7	182.4	194.2	207.0	219.6	232.4	245.0	253.6
75°	112.0	123.3	134.6	146.0	157.3	169.4	182.4	195.3	208.2	221.2	229.9
77.5°	85.8	97.6	109.5	121.3	133.1	145.7	158.8	172.0	185.1	198.2	207.0
80°	68.3	80.6	92.9	105.3	117.6	130.4	143.6	156.7	169.8	183.0	191.5
82.5°	53.7	65.9	78.0	90.2	102.5	115.1	128.5	141.8	155.1	168.4	176.9
85°	32.8	45.3	57.9	70.4	82.9	95.7	108.6	121.5	134.6	147.5	156.0
87.5°	18.1	30.8	43.4	56.1	68.8	81.9	95.2	108.6	122.1	135.5	143.9
90°	10.3	25.2	40.0	54.8	69.7	84.7	100.0	115.1	130.3	145.5	155.1
92.5°	34.0	44.7	55.3	65.9	76.6	88.6	102.3	115.8	129.5	143.0	151.7
95°	89.7	89.9	90.2	90.3	90.5	97.7	111.8	125.9	140.0	154.2	163.3
97.5°	170.0	152.2	134.5	116.7	99.0	98.2	114.4	130.6	146.9	163.1	171.7
100°	230.9	199.7	168.6	137.5	106.4	98.8	114.9	131.1	147.2	163.4	173.1
102.5°	297.1	295.8	294.4	293.1	291.8	276.5	247.4	218.4	189.3	160.2	170.5
105°	390.1	404.4	418.7	433.0	447.4	421.3	354.9	288.5	222.0	155.6	165.9
107.5°	497.2	508.7	520.2	531.7	543.2	507.9	425.7	343.5	261.4	179.1	182.8
110°	565.4	575.4	585.4	595.4	605.3	574.5	503.0	431.5	359.9	288.4	266.7



TEST NUMBER: P331551-940

CATALOG NUMBER: S122DIW-S675D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	630.4	639.0	647.6	656.3	664.9	664.0	653.3	642.6	631.9	621.2	524.8
115°	732.9	739.9	746.9	753.9	760.9	772.5	788.6	804.9	821.0	837.1	712.7
117.5°	823.5	830.4	837.1	844.0	850.8	860.8	874.1	887.3	900.6	913.8	888.3
120°	890.5	895.5	900.5	905.6	910.6	919.7	932.9	946.1	959.2	972.4	981.4
122.5°	947.3	952.1	956.9	961.6	966.4	975.4	988.5	1001.7	1014.8	1027.9	1035.5
125°	1032.9	1036.5	1040.2	1043.8	1047.6	1055.3	1067.1	1079.0	1090.7	1102.6	1110.0
127.5°	1111.3	1115.1	1119.0	1122.8	1126.7	1133.2	1142.5	1151.6	1160.9	1170.1	1178.0
130°	1161.0	1165.3	1169.6	1173.9	1178.2	1184.0	1191.4	1198.7	1206.0	1213.4	1221.4
132.5°	1211.7	1215.3	1219.0	1222.6	1226.2	1231.3	1237.6	1244.0	1250.4	1256.8	1264.1
135°	1276.8	1281.2	1285.8	1290.3	1294.8	1299.3	1303.9	1308.4	1313.0	1317.6	1324.6
137.5°	1343.5	1346.6	1349.7	1352.8	1355.9	1359.3	1363.2	1366.9	1370.6	1374.4	1380.9
140°	1387.1	1389.1	1391.2	1393.2	1395.3	1398.0	1401.6	1405.1	1408.5	1412.1	1417.8
142.5°	1423.6	1425.4	1427.3	1429.1	1430.9	1433.6	1437.3	1440.9	1444.6	1448.1	1453.0
145°	1480.1	1479.7	1479.4	1479.2	1478.9	1481.1	1485.9	1490.8	1495.5	1500.3	1503.5
147.5°	1530.0	1528.9	1527.9	1526.8	1525.7	1527.5	1532.2	1537.0	1541.8	1546.5	1548.1
150°	1562.5	1560.5	1558.5	1556.6	1554.5	1555.9	1560.3	1564.9	1569.3	1573.9	1575.6
152.5°	1589.8	1587.7	1585.5	1583.2	1581.1	1582.1	1586.4	1590.6	1594.9	1599.2	1600.9
155°	1629.7	1627.1	1624.6	1622.0	1619.5	1620.0	1623.4	1626.7	1630.1	1633.4	1635.1
157.5°	1660.9	1658.8	1656.6	1654.5	1652.3	1652.4	1654.7	1657.2	1659.5	1661.9	1663.8
160°	1679.1	1677.4	1675.8	1674.1	1672.4	1672.4	1674.1	1675.8	1677.4	1679.1	1680.8
162.5°	1695.3	1693.7	1692.0	1690.3	1688.6	1688.5	1690.0	1691.4	1692.9	1694.3	1696.3
165°	1717.2	1715.5	1713.8	1712.1	1710.4	1710.0	1710.8	1711.6	1712.5	1713.3	1715.4
167.5°	1733.4	1731.7	1730.0	1728.3	1726.6	1726.2	1727.0	1727.8	1728.6	1729.4	1731.3
170°	1742.6	1740.9	1739.2	1737.5	1735.8	1735.2	1735.8	1736.3	1736.9	1737.5	1739.5
172.5°	1748.6	1747.0	1745.3	1743.6	1741.9	1741.3	1741.9	1742.4	1743.0	1743.6	1745.5
175°	1756.5	1754.5	1752.6	1750.6	1748.6	1747.9	1748.5	1749.0	1749.6	1750.2	1752.1
177.5°	1757.7	1756.2	1754.6	1753.0	1751.4	1750.8	1751.0	1751.2	1751.4	1751.7	1753.3
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7



TEST NUMBER: P331551-940

CATALOG NUMBER: S122DIW-S675D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	628.1	628.1	628.1	628.1	628.1	628.1	628.1	628.1
2.5°	626.1	626.9	627.7	627.9	627.6	627.3	627.0	626.7
5°	624.2	625.4	626.6	627.1	626.9	626.7	626.5	626.2
7.5°	621.2	622.7	624.1	624.7	624.6	624.3	624.1	623.9
10°	618.6	620.2	621.9	622.5	622.3	622.1	622.0	621.7
12.5°	614.2	615.8	617.5	618.1	618.0	617.8	617.6	617.3
15°	606.3	608.1	609.9	610.7	610.6	610.3	610.1	609.9
17.5°	596.0	598.0	599.9	600.8	600.8	600.8	600.8	600.8
20°	588.0	590.2	592.4	593.5	593.5	593.5	593.5	593.5
22.5°	579.3	581.5	583.6	585.0	585.2	585.6	585.9	586.2
25°	565.6	568.0	570.4	571.9	572.6	573.2	573.8	574.4
27.5°	550.5	553.6	556.7	558.4	558.8	559.3	559.7	560.2
30°	539.9	543.1	546.4	548.3	548.9	549.6	550.1	550.7
32.5°	528.5	532.3	535.9	538.3	539.5	540.6	541.6	542.7
35°	512.3	516.7	521.2	524.1	525.6	527.0	528.3	529.8
37.5°	495.6	500.5	505.5	508.7	510.2	511.7	513.2	514.7
40°	483.8	489.1	494.4	497.9	499.7	501.6	503.4	505.2
42.5°	472.4	478.2	483.9	487.8	489.5	491.4	493.2	495.0
45°	455.0	461.2	467.5	471.6	473.7	475.7	477.7	479.7
47.5°	436.8	443.4	449.9	454.2	456.5	458.7	460.9	463.2
50°	424.3	431.1	438.1	442.6	444.9	447.1	449.2	451.5
52.5°	410.8	417.9	424.9	429.6	431.9	434.4	436.8	439.2
55°	390.5	397.8	405.1	410.0	412.7	415.3	417.9	420.5
57.5°	369.1	376.9	384.8	390.0	392.7	395.4	398.1	400.7
60°	354.9	362.6	370.3	375.6	378.4	381.2	384.1	386.9
62.5°	339.8	348.0	356.2	361.7	364.3	366.9	369.6	372.3
65°	317.0	325.3	333.6	339.0	341.7	344.3	347.0	349.6
67.5°	293.8	302.2	310.6	316.2	318.9	321.6	324.4	327.2
70°	277.8	286.4	295.2	300.7	303.1	305.6	308.0	310.4
72.5°	262.2	270.6	279.2	284.9	287.8	290.8	293.6	296.6
75°	238.6	247.3	256.0	261.6	264.3	266.9	269.6	272.2
77.5°	215.6	224.3	232.9	238.6	241.5	244.3	247.1	249.9
80°	199.9	208.5	217.0	222.7	225.4	228.3	231.1	234.0
82.5°	185.4	193.9	202.4	207.9	210.6	213.3	216.0	218.6
85°	164.4	173.0	181.5	187.1	189.9	192.8	195.6	198.4
87.5°	152.5	161.0	169.6	175.2	177.9	180.6	183.3	186.0
90°	164.5	174.1	183.5	189.8	192.8	195.7	198.8	201.7
92.5°	160.3	169.0	177.7	183.4	186.2	189.0	191.7	194.5
95°	172.4	181.5	190.6	196.2	198.3	200.5	202.6	204.7
97.5°	180.3	188.9	197.5	203.1	205.9	208.7	211.3	214.1
100°	182.8	192.5	202.2	208.6	211.3	214.1	216.9	219.7
102.5°	180.7	191.0	201.3	207.9	210.9	213.9	217.0	220.0
105°	176.0	186.2	196.4	203.1	206.5	209.8	213.2	216.5
107.5°	186.4	190.0	193.7	197.2	200.5	203.9	207.2	210.6
110°	245.0	223.3	201.5	192.3	195.7	199.1	202.4	205.8



TEST NUMBER: P331551-940

CATALOG NUMBER: S122DIW-S675D1440U940-4F0-1E-UDD-D

CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	428.5	332.2	235.8	189.2	192.3	195.5	198.6	201.7
115°	588.3	463.9	339.5	268.2	250.1	232.1	214.0	195.9
117.5°	862.7	837.1	811.5	766.4	701.9	637.2	572.6	508.0
120°	990.5	999.5	1008.6	995.1	959.4	923.5	887.7	851.9
122.5°	1042.9	1050.4	1058.0	1059.0	1053.6	1048.0	1042.6	1037.1
125°	1117.5	1124.9	1132.4	1137.4	1140.1	1142.7	1145.4	1148.1
127.5°	1185.9	1193.8	1201.7	1206.6	1208.5	1210.5	1212.5	1214.4
130°	1229.3	1237.2	1245.3	1249.9	1251.2	1252.6	1253.9	1255.3
132.5°	1271.4	1278.8	1286.1	1290.5	1291.8	1293.2	1294.5	1295.8
135°	1331.7	1338.7	1345.9	1349.9	1350.9	1352.0	1353.1	1354.1
137.5°	1387.4	1393.8	1400.3	1403.8	1404.2	1404.6	1405.1	1405.5
140°	1423.6	1429.4	1435.2	1438.0	1437.8	1437.6	1437.3	1437.2
142.5°	1457.9	1462.9	1467.8	1470.1	1469.7	1469.4	1469.0	1468.6
145°	1506.7	1509.8	1513.1	1514.5	1514.0	1513.7	1513.2	1512.9
147.5°	1549.7	1551.4	1553.0	1553.4	1552.7	1552.0	1551.3	1550.7
150°	1577.3	1579.0	1580.6	1580.7	1579.4	1578.0	1576.5	1575.1
152.5°	1602.6	1604.3	1606.0	1605.9	1604.0	1602.2	1600.4	1598.5
155°	1636.8	1638.5	1640.2	1639.9	1637.7	1635.5	1633.2	1630.9
157.5°	1665.7	1667.6	1669.6	1669.4	1667.2	1665.0	1662.8	1660.6
160°	1682.5	1684.2	1685.9	1685.8	1683.8	1681.8	1679.8	1677.8
162.5°	1698.2	1700.1	1702.0	1701.7	1699.3	1696.9	1694.5	1692.1
165°	1717.3	1719.3	1721.3	1721.3	1719.3	1717.3	1715.4	1713.3
167.5°	1733.3	1735.3	1737.2	1737.0	1734.5	1731.9	1729.4	1726.8
170°	1741.4	1743.4	1745.3	1745.1	1742.6	1740.0	1737.5	1734.9
172.5°	1747.5	1749.4	1751.4	1751.1	1748.6	1746.1	1743.6	1741.0
175°	1754.1	1756.0	1758.0	1757.7	1754.8	1751.9	1749.2	1746.3
177.5°	1754.8	1756.4	1758.0	1757.7	1755.7	1753.7	1751.7	1749.6
180°	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7	1752.7

(END OF REPORT)